

IN THE CLAIMS:

1-8. (Canceled)

9. (Currently Amended) A lighting device including a plurality of LED modules, each LED module in the plurality of LED modules comprising:

a main substrate;

an LED mounting unit composed of one or more LED bare chips mounted on a
5 main surface of the main substrate;

a power supply terminal provided on the main surface of the main substrate, and operable to receive power from an electric power source;

a luminous intensity stabilization circuit connected electrically to the power supply terminal and the LED mounting unit; and

10 a thermal element unit connected to the luminous intensity stabilization circuit, and including a thermal element and a first comparator provided in a vicinity of an area in which the one or more LED bare chips are mounted,

wherein when at least one of the LED bare chips in any one of the LED modules rises in temperature to a predetermined temperature or higher, the luminous intensity
15 stabilization circuit ~~reduces or~~ stops current to the one LED module independently from any other LED modules in the plurality of LED modules, according to a judgment signal from the first comparator based on detected temperature information from the thermal element, and
each of the LED modules is individually detachable from the lighting device.

10. (Currently Amended) A lighting device comprising: The lighting device of Claim

9, further including:

a plurality of LED modules, each LED module in the plurality of LED modules including:

a main substrate,

an LED mounting unit composed of one or more LED bare chips mounted on a main surface of the main substrate,

a power supply terminal provided on the main surface of the main substrate, and operable to receive power from an electric power source,

a luminous intensity stabilization circuit connected electrically to the power supply terminal and the LED mounting unit,

a thermal element unit connected to the luminous intensity stabilization circuit, and including a thermal element and a first comparator provided in a vicinity of an area in which the one or more LED bare chips are mounted;

one constant voltage circuit supplying a constant voltage to each LED module, using power from a power supply source; and

one logical circuit electrically connected to the constant voltage circuit and the thermal element unit of each LED module,

wherein, when at least one LED bare chip in at least one LED module rises in temperature to a predetermined temperature or higher, the constant voltage circuit supplies to all the LED modules, power to the power supply terminals such that the luminous intensity stabilization circuits ~~reduces or stop[s]~~ current supplied to at least one of the LED mounting unit independently from any other LED modules in the plurality of LED modules, based on

instruction information output from the logical circuit that is received, from the thermal element
unit of the at least one LED module, a judgment signal of the first comparator based on detected
temperature information of the thermal element of the at least one LED module.

11-14. (Cancelled)

15. (Previously Presented) The lighting device of Claim 9, wherein the luminous
intensity stabilization circuit is a constant current circuit.

16. (Currently Amended) A lighting device comprising:

a plurality of LED modules, each LED module in the plurality of LED modules
including:

a main substrate,

an LED mounting unit composed of one or more LED bare chips mounted on a
main surface of the main substrate,

a power supply terminal provided on the main surface of the main substrate, and
operable to receive power from an electric power source,

a constant current circuit connected electrically to the power supply terminal and
the LED mounting unit,

a thermal element unit connected to the constant current circuit, and including a
thermal element and a first comparator provided in a vicinity of an area in which the one or more
LED bare chips are mounted;

one constant voltage circuit supplying a constant voltage to each LED module,
using power from a power supply source; and

one logical circuit electrically connected to the constant voltage circuit and the

thermal element unit of each LED module,

wherein, when at least one LED bare chip in at least one LED module rises in temperature to a predetermined temperature or higher, the constant voltage circuit supplies to all the LED modules, power to the power supply terminals such that the constant current circuits stop current supplied to at least one of the LED mounting unit independently from any other LED modules in the plurality of LED modules, based on instruction information output from the logical circuit that is received, from the thermal element unit of the at least one LED module, a judgment signal of the first comparator based on detected temperature information of the thermal element of the at least one LED module, and

each of the LED modules is individually detachable from the lighting device.

The lighting device of Claim 10, wherein the luminous intensity stabilization circuit is a constant current circuit and each of the LED modules is individually detachable.

17. (Currently Amended) A lighting device comprising: The lighting device of Claim 9 further comprising:

a plurality of LED modules, each LED module in the plurality of LED modules including:

a main substrate,
an LED mounting unit composed of one or more LED bare chips mounted on a main surface of the main substrate,

a power supply terminal provided on the main surface of the main substrate, and operable to receive power from an electric power source,

a luminous intensity stabilization circuit connected electrically to the power

supply terminal and the LED mounting unit,

a thermal element unit connected to the luminous intensity stabilization circuit,
and including a thermal element and a first comparator provided in a vicinity of an area in which
the one or more LED bare chips are mounted, and

15 a current detection unit including a second comparator connected to the one or
more LED bare chips to detect a current amount,

wherein when at least one of the LED bare chips in any one of the LED modules rises in
temperature to a predetermined temperature or higher, the luminous intensity stabilization circuit
stops current to the one LED module independently from any other LED modules in the plurality
20 of LED modules, according to a judgment signal from the first comparator based on detected
temperature information from the thermal element;

a constant voltage circuit supplying a constant voltage to each LED module, using
power from a power supply source; and

~~a current detection unit including a second comparator connected to the one or~~
25 ~~more LED bare chips to detect a current amount;~~

a logical circuit electrically connected to the constant voltage circuit and the
current detection unit,

wherein when the current amount in at least one LED bare chip in at least one
LED module rises above a predetermined current amount, the constant voltage circuit supplies to
30 all the LED modules, power to the power supply terminal such that the luminous intensity
stabilization circuit reduces or stops current supplied to the LED mounting unit, based on
instruction information output from the logical circuit that received, from the current detection
unit of the at least one LED module, a judgment signal of the second comparator based on the

detected current amount of the at least one LED module, and

35 each of the LED modules is individually detachable from the lighting device.

18. (Currently Amended) A lighting device comprising:

a plurality of LED modules, each LED module in the plurality of LED modules
including:

a main substrate,

5 an LED mounting unit composed of one or more LED bare chips mounted on a
main surface of the main substrate,

a power supply terminal provided on the main surface of the main substrate, and
operable to receive power from an electric power source,

a constant current circuit connected electrically to the power supply terminal and
10 the LED mounting unit,

a thermal element unit connected to the constant current circuit, and including a
thermal element and a first comparator provided in a vicinity of an area in which the one or more
LED bare chips are mounted, and

a current detection unit including a second comparator connected to the one or
15 more LED bare chips to detect a current amount,

wherein when at least one of the LED bare chips in any one of the LED modules rises in
temperature to a predetermined temperature or higher, the constant current circuit stops current to
the one LED module independently from any other LED modules in the plurality of LED
modules, according to a judgment signal from the first comparator based on detected temperature
20 information from the thermal element;

a constant voltage circuit supplying a constant voltage to each LED module, using

power from a power supply source; and

a logical circuit electrically connected to the constant voltage circuit and the current detection unit,

- 25 wherein when the current amount in at least one LED bare chip in at least one LED module rises above a predetermined current amount, the constant voltage circuit supplies to all the LED modules, power to the power supply terminal such that the constant current circuit reduces or stops current supplied to the LED mounting unit, based on instruction information output from the logical circuit that received, from the current detection unit of the at least one
- 30 LED module, a judgment signal of the second comparator based on the detected current amount of the at least one LED module, and

each of the LED modules is individually detachable from the lighting device.

The lighting device of Claim 17, wherein the luminous intensity stabilization circuit is a constant current circuit and each of the LED modules is individually detachable.

19. (Currently Amended) A lighting device ~~including a plurality of LED modules,~~
~~each LED module in the plurality of LED modules~~ comprising:

a plurality of LED modules;

a constant voltage circuit supplying a constant voltage to each LED module, using

- 5 power from a power supply source; and

a logical circuit electrically connected to the constant voltage circuit and a thermal element unit in each of the LED modules,

wherein each LED module includes:

a main substrate;

an LED mounting unit composed of one or more LED bare chips mounted on a main surface of the main substrate;

a power supply terminal provided on the main surface of the main substrate, and operable to receive power voltage from an electric power source the constant voltage circuit;

a constant current circuit connected electrically to the power supply terminal and the LED mounting unit; and

a constant voltage circuit supplying a constant voltage to each LED module, using power from a power supply source; and

a current detection the thermal element unit connected to the constant current circuit, and including a thermal element and a comparator connected to the one or more LED bare chips to detect a current amount provided in a vicinity of an area in which the one or more LED bare chips are mounted;

a logical circuit electrically connected to the constant voltage circuit and the plurality of current detection unit;

wherein when the current amount in at least one LED bare chip in at least one LED module rises above a predetermined current amount, the constant voltage circuit supplies to all the LED modules, power to the power supply terminal such that the luminous intensity stabilization circuit reduces or stops current supplied to the LED mounting unit, based on instruction information output from the logical circuit that received, from the current detection unit of the at least one LED module, a judgment signal of the comparator based on the detected current amount of the at least one LED module.

wherein when at least one of the LED bare chips in any one of the LED modules rises in temperature to a predetermined temperature or higher, the constant voltage circuit stops voltage

supply to the one LED module independently from any other LED modules in the plurality of LED modules, according to a judgment signal from the comparator based on detected

35 temperature information from the thermal element, and

each of the LED modules is individually detachable from the lighting device.

20. (Cancelled)

21. (Currently Amended) A lighting device ~~including a plurality of LED modules, each LED module in the plurality of LED modules comprising:~~

a plurality of LED modules, each LED module in the plurality of LED modules including:

5 a main substrate_a[[;]]

an LED mounting unit composed of one or more LED bare chips mounted on a main surface of the main substrate_a[[;]]

a power supply terminal provided on the main surface of the main substrate, and operable to receive power from an electric power source_a[[;]]

10 a constant current circuit connected electrically to the power supply terminal and the LED mounting unit_t[[;]]

a thermal element unit connected to the constant current circuit, and including a thermal element and a first comparator provided in a vicinity of an area in which the one or more LED bare chips are mounted_a[[;]] and

15 a current detection unit including a second comparator connected to the one or more LED bare chips to detect a current amount;

a constant voltage circuit supplying a constant voltage to each LED module, using

power from a power supply source;

a first logical circuit electrically connected to the constant voltage circuit and the
20 thermal element unit of each LED module,

wherein, when at least one LED bare chip in at least one LED module rises in
temperature to a predetermined temperature or higher, the constant voltage circuit supplies to all
the LED modules, power to the power supply terminal such that the constant current circuit
~~reduces or~~ stops current supplied to the LED mounting unit, based on instruction information
25 output from the first logical circuit that is received, from the thermal element unit of the at least
one LED module, a judgment signal of the first comparator based on detected temperature
information of the thermal element of the at least one LED module; and

a second logical circuit electrically connected to the constant voltage circuit and
the current detection unit,

30 wherein when the current amount in at least one LED bare chip in at least one
LED module rises above a predetermined current amount, the constant voltage circuit supplies to
all the LED modules, power to the power supply terminal such that the constant current circuit
~~reduces or~~ stops current supplied to the LED mounting unit, based on instruction information
output from the second logical circuit that received, from the current detection unit of the at least
35 one LED module, a judgment signal of the second comparator based on the detected current
amount of the at least one LED module.

22. (Currently Amended) The lighting device of Claim 21, wherein each of the LED
modules is individually detachable from the lighting device.